

CALIFORNIA ENERGY COMMISSION

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October 5, 2006

Julie Way, President, AES Highgrove, LLC
AES North America West
690 North Studebaker Road
Long Beach, CA 90803

DOCKET	
06-AFC-2	
DATE	OCT -5 2006
RECD.	OCT -5 2006

Dear Ms. Way,

AES HIGHGROVE PROJECT (06-AFC-2) DATA REQUESTS

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests that AES Highgrove, LLC, supply the information specified in the enclosed data requests.

The subject areas addressed in the enclosed data requests 1 through 85 are air quality, biological resources, cultural resources, hazardous materials management, land use, socioeconomics, soil and water resources, visual resources, visible plume modeling, and waste management. The information requested is necessary to understand the project, assess whether the project would result in significant environmental effects, and to assess project alternatives and mitigation measures.

Written responses to the enclosed data requests are due to the Energy Commission staff by November 6, 2006, or a later date agreed upon by the Energy Commission staff and the applicant.

If you are unable to provide the information requested in the data requests or object to providing it, you must notify the committee assigned to the project and the project manager within 10 days of receiving these requests, stating your reason for delay or objection.

If you have any questions regarding the enclosed data requests, please contact me at (916) 651-8853, or email to rworl@energy.state.ca.us.

Sincerely,

Robert Worl
Project Manager

Enclosure
Proof of Service
Docket (06-AFC-2)

**AES Highgrove Project
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Data Requests**

Technical Area: Air Quality

Author: Joe Loyer

BACKGROUND: EMISSION REDUCTION CREDITS AND OFFSETS

AES proposes three possible mitigation strategies for air quality impacts. Staff believes that each strategy raises timing and implementation issues. First, for CO only, AES notes that if the South Coast Air Quality Management District (District) is re-designated as attainment of the federal CO standards by the U.S. Environmental Protection Agency (USEPA), the District would not require CO offsets. Currently, the USEPA expects the re-designation to be completed in late December of 2006. However, federal re-designation can be a multi-year process and still might not occur in the time frame of this licensing proceeding. Second for CO, VOC, and PM10, AES proposes to purchase ERCs on the open market, where they are in short supply. Third, AES identified the Priority Reserve as an option for credits.

The AFC does not provide documentation that sufficient CO, VOC or PM10 ERCs have been secured, either through option contracts or outright ownership, or that the applicant has made a good faith effort to purchase ERCs as required for the Priority Reserve program. For staff to complete its preliminary analysis, evidence needs to be provided by the applicant that credits are being secured.

DATA REQUEST

1. Please identify any CO, VOC or PM10 ERCs owned by the applicant or any affiliate that the District might require to be surrendered as a condition for participation in the Priority Reserve. Please include the ERC number, the pollutant type and amount in pounds per day, and ERC source location and name.
2. Please provide option contracts and /or evidence of acquisition of ERCs for CO.
3. If the applicant is unable to adequately respond to Data Requests 1 and 2 above, please provide a status report starting November 1, 2006. Please provide this report monthly until the applicant identifies option contracts and/or evidence of acquisition of ERCs for the CO, VOC and PM10 liability of the project, or until the start of project Air Quality Evidentiary Hearings. The report should be specific to each pollutant and provide new information and update information from previous monthly status reports as appropriate. The reports should include the following information for all inquiries and acquisitions:
 - a. contact names and telephone numbers;
 - b. company or source names;
 - c. pollutant credit types and amounts in lbs/day;
 - d. ERC certificate numbers;

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- e. the methods of emission reductions (e.g., shutdown, reduction of hours of operation, emission controls, etc.);
- f. the status of ERC or option negotiations;
- g. the location of the emission reduction credits.

BACKGROUND: FINE PARTICULATE MATTER (PM2.5)

The applicant has not provided any discussion about mitigation of the facility's PM2.5 impacts (generally 100 percent of natural gas combustion particulate matter is PM2.5) on the local and regional air quality. Because the District does not have an offset program for PM2.5, staff is concerned that the Priority Reserve program and PM10 ERC program will not be able to specifically provide PM2.5 equivalent credits, thereby making it difficult to conclude that the project's PM2.5 liability is mitigated.

DATA REQUEST

- 4. Please provide proposal(s) to mitigate the facility's potentially significant PM2.5 impacts.
- 5. Please investigate and report on the potential for local PM2.5 particulate matter emission reductions and mitigation measures.

BACKGROUND: NITROGEN OXIDES

The applicant proposes to rely on the District's nitrogen oxides (NOx) RECLAIM program to acquire emission reduction credits to mitigate the project NOx emission impacts.

DATA REQUEST

- 6. Please provide a list of NOx RECLAIM trading credits (RTCs) that the applicant owns or has under option contract, and provide adequate documentation that these cover the NOx liability of the project.

BACKGROUND: START-UP AND SHUT DOWN EMISSION ESTIMATES

The AFC indicates that the project consists of three General Electric (GE) LMS100 gas turbine generators equipped with water injection and selective catalytic reduction (SCR) systems to minimize NOx emissions. In addition, a carbon monoxide (CO) oxidation catalyst system would also be utilized to minimize the turbines' volatile organic compounds (VOC) and CO emissions.

Appendix 8.1B provides tables summarizing the estimated emissions of the turbines and cooling towers. It is not clear how these estimated emissions were derived. For example, the GE-provided emissions estimates indicate that a LMS100 turbine emits 25 ppm NOx at 15 % oxygen, which is equivalent to 81 lbs/hr if the SCR is not in operation. The start-up duration for each turbine is approximately 35 minutes during which time the

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SCR is not expected to be fully operational; therefore, staff expects that the turbine start-up emissions will be higher than the 7 lbs/start-up identified (AFC Appendix 8.1B).

DATA REQUEST

7. Please provide the assumptions and calculations used to derive the individual turbine start-up emissions for NO_x, CO and VOC of 7, 15.4 and 2.1 lbs/event, respectively.
8. Please provide the assumptions and calculations used to derive the individual turbine shut down emissions for NO_x, CO and VOC of 4.3, 18.2 and 1.6 lbs/event, respectively.
9. If the start-up and shut-down emissions rates and characteristics are revised, please provide a revised modeling analysis showing the facility impacts during start-ups and shut-downs.

BACKGROUND: NATURAL GAS SULFUR CONTENT

The AFC indicates that the facility will use natural gas with a maximum sulfur content of 0.25 grains per 100 standard cubic feet (gr/100scf). Staff has seen in previous siting cases that the delivered natural gas can contain as much as 1gr sulfur/100scf. If higher sulfur content natural gas fuel is used at the facility, SO_x and PM emissions may be underestimated.

DATA REQUEST

10. Please provide assurance that the sulfur content of supplied natural gas will not be above 0.25 gr/100scf.
11. Please provide the steps the applicant would take to ensure that natural gas that has higher than 0.25 gr/100scf of sulfur will not be used at the facility.
12. Please provide the method for ensuring continuous compliance with the sulfur content limits specified for the supplied natural gas fuel.

BACKGROUND: REVISED MODELING INFORMATION REQUEST

The modeling results of the oxides of nitrogen (NO_x) emissions assume that 100% of the NO_x emissions are converted into NO₂ emission impacts for both the commissioning and normal operation (page 8.1-40) of the proposed project. The result from this overly conservative assumption is an analysis that does not accurately reflect the project NO_x emission impacts. The reported impacts of the modeling analysis suggest that the project commissioning emissions of NO_x will exceed the state one hour ambient air quality standard for NO₂. The resulting impacts for normal operation are not as dramatic, but are also excessively high. The applicant proposes (page 8.1-40) to use the ozone limiting method (OLM) and ambient ratio method (ARM) to produce a less

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conservative, but more representative modeling analysis for both commissioning and normal operation.

DATA REQUEST

13. Please provide a refined NOx emission modeling analysis using the OLM and ARM to produce a more representative NOx emission impact for the proposed project during both commissioning and normal operation.

BACKGROUND: EMISSION LIMIT CLARIFICATION

The applicant proposes to operate the project with a NOx limit of 3.5 ppmvd @15% O₂. However, both the Sun Valley and Walnut Creek power projects propose to operate at a NOx emission limit of 2.5 ppmvd @ 15% O₂. Since all three of these projects are proposing to install the same model combustion turbines from General Electric (GE LMS100s) and all three projects plan to operate these turbines in a similar manner (generally load following or peaking), staff needs to understand why the Highgrove Project is proposed to be 40% higher than the other two.

DATA REQUEST

14. Please explain why the proposed NOx emission limit for the Highgrove Project is 40% higher than both the Walnut Creek and Sun Valley Power Projects.

BACKGROUND: CONSTRUCTION ACTIVITY CLARIFICATION

The applicant proposes to continue some construction activities 24-hours per day and 7 day per week (p. 2-15). This is an accelerated construction schedule and may cause or contribute to an exceedance of the short-term federal or state ambient air quality standards (AAQS). Staff is particularly concerned with the PM10 and PM2.5 24-hour AAQS. The provided air dispersion modeling of the construction emissions, however, states that the construction modeling assumes an 8-hour day and 22 days per month level of activity (Appendix 8.1A-2, Table 8.1A-4a).

DATA REQUEST

15. Please describe in greater detail the types of construction activities mentioned on page 2-15 that would continue for 24 hours per day and 7 days a week.
16. Please provide an air dispersion modeling analysis for construction activities which accurately reflect the proposed 24/7 accelerated construction schedule.

BACKGROUND: MODELING RESULTS FOR SENSITIVE RECEPTORS

The applicant states that the power plant project is 1,000 feet from the nearest classroom in the nearby proposed Colton High School #3 site. However, the students at the proposed school would be considered sensitive receptors and must be treated accordingly in the air quality analysis. Additionally, within one mile of the proposed

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power plant site, there are a significant number of residential neighborhoods. Neighborhoods such as these typically contain nursing homes, daycare facilities and even small clinics or hospitals. The applicant has made no indication in the application of any such facilities. These facilities would also be considered sensitive receptors and must be treated accordingly in the air quality analysis. While these receptors are sensitive to all pollutants emitted, the ambient air quality is such that only the PM10/PM2.5 emissions from the proposed power plant project may cause a direct impact on the receptors.

DATA REQUEST

17. Please provide a complete list, with an attached map, identifying all parks and recreational areas (see figure 2.2-3), daycare facilities, schools (public and private), nursing homes/facilities and clinics or hospitals within 10 kilometers of the proposed power plant project site. Please include on the list the project's PM10/PM2.5 air emissions impacts at each sensitive receptor listed.
18. Please provide maps showing isopleths of the project's PM10/PM2.5 air emission impacts for the maximum 24-hour and annual-average standards and all sensitive receptors listed in the above data request within 10 kilometers of the proposed power plant project site.

BACKGROUND: WASTEWATER TRUCKING EMISSIONS

In Section 7.4.3 of the AFC, the applicant indicated that miscellaneous plant water drainage would be collected, put through an oil-water separator, mixed with the cooling tower blowdown and trucked approximately five (5) miles to the Santa Ana Regional Inceptor (SARI) pipeline for disposal. However, the applicant does not estimate the emissions from the wastewater collection, pumping and truck transportation. This trucking arrangement is in lieu of the more typical pipeline arrangement. Since there will be on-going emissions as a direct result of the construction and operation of the wastewater collection and disposal system, staff will evaluate these collection and truck emissions with the rest of the project emissions. The Soils and Water section requests a cost evaluation of constructing a pipeline connection to the SARI and analysis of any other alternative methods of disposal for the plant wastewater and cooling tower blowdown, such as a zero liquid discharge system (ZLD). Air Quality staff need to assess the potential air quality impacts associated with the truck-transport process for delivery of wastewater to the SARI.

DATA REQUEST

19. Please provide an emission comparison (NO_x, SO_x, CO, VOC, PM10 and PM2.5) of the proposed collection and trucking arrangement and the construction related emissions of a pipeline connection with the SARI and any other alternative methods of disposal for the plant water drainage and cooling tower blowdown (ZLD). Please include the following elements:

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- a. For the proposed trucking arrangement:
 - i) Average-daily, average-monthly and annual-total number of trips and vehicle miles traveled.
 - ii) Truck emissions based on EPA/CARB TIER 0, TIER 1 and TIER 2 diesel emission standards for appropriately sized truck engines as well as CNG truck engines.
 - iii) Should auxiliary pumps be used separately from the truck engines for onloading and offloading of wastewater at the project site and at the SARI, please provide the type, size, service time per load, and emissions ratings for these engines.
 - iv) Average-daily, average-monthly, and annual-total collection, pumping, and trucking-related emissions for NO_x, SO_x, CO, VOC, PM₁₀ and PM_{2.5}.
- b. For the alternative pipeline connection with the SARI:
 - i) The estimated route for the pipeline.
 - ii) The estimated timeline to complete the pipeline.
 - iii) The construction-related average-daily and total-monthly emissions assuming TIER 1 construction equipment firing CARB Ultra Low Sulfur Diesel Fuel and standard dust control measures.
- c. For any other alternative (ZLD)
 - i) The estimated construction emissions.
 - ii) The estimated construction timeline.
 - iii) The estimated operational emissions.
 - iv) The estimated effect on power plant thermal efficiency.

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Technical Area: Biological Resources
Author: N. Misa Ward

BACKGROUND

The Application for Certification for the AES Highgrove project includes maps of biological resources in the vicinity of project facilities. Due to the high level of development and limited native habitat opportunities in the project vicinity, native species of concern (e.g. migratory birds) could be more likely to reside in or temporarily use less suitable habitats such as disturbed vegetation or ornamental areas. Figure 8.2-3a indicates that the adjacent Cage Park property located south of the project site contains ornamental vegetation and a drainage feature. Due to the fencing of this property, presence of larger trees, and relative low human usage, the potential for sensitive wildlife that could be indirectly impacted by adjacent project activities exists.

DATA REQUEST

20. Please provide a list of wildlife species, including common and sensitive, that were either observed during surveys or have potential to inhabit the Cage Park property.
21. Please provide a list of characteristic plant species (e.g. ornamental trees and any native plants) on the Cage Park property that could be habitat for sensitive wildlife species.

BACKGROUND

Section 8.2.4.2.4 on page 8.2-19 states that wildlife impacts related to noise from power plant operations are unlikely due to the tendency for tolerance of low-level, background noise. However, noise and/or vibration levels associated with construction activities, such as pile-driving, demolition, or trenching, will exceed the background level. Burrowing owls, which are a California Species of Concern, are known to inhabit roadside berms and be vulnerable to noise and vibration. Other California species of concern, such as the California horned lark and tricolored blackbird, could nest near the generating station that has been proposed for demolition, and be adversely affected by noise and vibration. In addition, the southern portion of the natural gas pipeline route contains relatively undisturbed coastal sage scrub that could support the federally threatened coastal California gnatcatcher or other sensitive species. Although trenching will occur in the road, noise presents a potential impact because this habitat immediately flanks the road.

DATA REQUEST

22. Please provide an analysis of the potential impacts to sensitive wildlife that could result from noise and vibration associated with the construction of the power plant and natural gas supply pipeline. As appropriate, provide species-specific measures to mitigate potential noise and vibration impacts.

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BACKGROUND

Table 8.2-5 on page 8.2-25 indicates that a number of staff members from biological resources agencies have been contacted regarding the project and potential biological issues of concern. Staff could not find any documentation that describes communication with the California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), or U.S. Army Corps of Engineers (USACE) regarding sensitive biological resources, such as sensitive species or waters of the U.S., which may occur in the project area.

DATA REQUEST

23. Please provide any supporting documents (e.g. letters or records of conversation) that resulted from communication with CDFG, USFWS, and USACE regarding potential impacts to sensitive biological resources or waters of the U. S.

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Technical Area: Cultural Resources

Author: Dorothy Torres and Beverly Bastian

Please provide any documents under confidential cover that may reveal the location of an archaeological site.

BACKGROUND

On page 8.3-14 of the Application for Certification (AFC), there is a discussion of the record search conducted at the California Historical Resources Information System (CHRIS). It does not appear that other sources of information were contacted.

According to CEQA Guidelines Section 15064.5 (a) (2), cultural resources included in a local register of historical resources must be treated as significant by public agencies unless a preponderance of evidence demonstrates that it is not significant. Properties within ½ mile of the proposed project site and within ¼ mile of the proposed gas line that have been listed by local entities according to ordinance need to be identified. In addition, local archaeological and historical societies at times are aware of cultural resources that have not been formally recognized by public entities.

DATA REQUEST

24. Please provide copies of local listings of properties that have been designated as cultural or historic resources according to local ordinance.
25. Please include listings by the City of Grand Terrace, the City of Riverside, San Bernardino County, and Riverside County.
26. Please also include a copy of the requirements used by the local jurisdictions to qualify buildings or structures for the listing.
27. Please contact local historical and archaeological societies that might have knowledge of historical or archaeological resources in the area of the project and provide copies of the inquiry letters and any responses.

BACKGROUND

Guidance in federal law states that cultural resources over 50 years of age may be eligible for the National Register of Historic Places. The existing Generating Station (HGS) and Highgrove Substation, both built in the 1950s, are more than 45 years old, and both will be affected by the project. Guidance from the California Office of Historic Preservation (*Instructions for Recording Historical Resources, March 1995*) states that properties should be considered for eligibility to the California Register at 45 years of age because a project might take as long as 5 years to reach completion. The existing HGS would be demolished as a result of the project.

The proposed project would connect to the electrical grid using Highgrove Substation bays that are now used as connections for the existing plant. A new building would be

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constructed within the boundaries of the substation to house a control room for the repositioned controls now housed in the HGS. The changes that would occur may be considered impacts. Staff needs to determine whether the existing HGS and Highgrove Substation are eligible for the California Register and whether the HP project will impact the values that may qualify them for eligibility to the California Register.

After significance of a property is considered, it must then be assessed to determine whether it retains integrity. If it retains integrity and if values that make the cultural resources significant (eligible for the California Register) will be impacted, then the impact is significant and mitigation would be necessary. The eligibility evaluation of the existing HGS and Highgrove Substation must be completed by someone who meets the Secretary of Interior's Standards for architectural history (preferably with industrial structure experience).

DATA REQUEST

28. Please provide a discussion of the significance of the resource(s) under CEQA Section 15064.5 (a), (3), (A), (B), (C), & (D) on the appropriate Department of Parks and Recreation (DPR) forms, including the evaluation form, and provide staff with a copy of the assessment and the specialist's conclusions regarding the significance of the two properties.

BACKGROUND

AFC Volume 2, Appendix 8.3A includes responses from Native Americans who may have heritage concerns in the project area. When the Native American Heritage Commission (NAHC) provides a list of Native Americans who wish to be contacted regarding construction disturbances on land where they have heritage concerns, the NAHC requests that the project make a follow up telephone call to Native Americans who have not responded.

DATA REQUEST

29. Please provide copies of any additional written responses received from Native Americans since the AFC was compiled. If responses have been received by telephone, please provide a summary of each conversation. If the location of archaeological sites may be revealed in the information, please provide the responses under confidential cover.
30. Please make at least one telephone call to Native American individuals or groups whose names were provided by the NAHC, if they have not responded to the project. Please provide a copy of any written responses and a summary of any telephone conversations.

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BACKGROUND

Table 8.3-2 provides a list of previously recorded historical resources identified during the Archival Research search described in Section 8.3.3.5.2. During a site visit to the proposed project location, staff drove the proposed gas line route. It appears that none of the residences identified in Table 8.3-2 are within 50 feet of the gas line route or of the proposed HP site. From information compiled by the CHRIS it appears that during the 1980s, the Riverside Historical Commission recorded numerous historic residences in the vicinity of Iowa Avenue, but did not record commercial building. Commercial buildings that are more than 45 years old may be affected by vibrations from jack hammers or heavy equipment used to construct the gas pipeline. It does appear that there are two previously recorded residences that might (as determined from the CHRIS map) be within 50 feet of the gas pipeline route.

DATA REQUEST

31. Please have a qualified architectural historian who meets the Secretary of Interior Standards in Architectural History conduct a reconnaissance-level (windshield) survey of the natural gas pipeline route and provide a brief report characterizing the street-side built environment as industrial, commercial, or residential zones, including general descriptions of each zone. This request for a survey by a qualified architectural historian is consistent with staff's overall approach for identifying potential significant historic resources. Please identify and record on a DPR 523 form any commercial buildings that appear to be over 45 years of age located within 50 feet of the project site or the gas line route. Please provide copies of the completed DPR forms.
32. Please determine whether CHRIS number 6936 at 1677 Elliot Street, and CHRIS number 6933 at 1197 Church Street still exist. If the buildings are still present in those locations, please determine whether the buildings are within 50 feet of the proposed gas line route. If they are within 50 feet, please discuss potential damage to each building from vibrations caused by jack hammers or heavy equipment that would be used to install the gas line and identify appropriate mitigation.

BACKGROUND

The CHRIS has identified the proposed plant site as a location that is sensitive for archaeological resources. Staff needs information on the extent of potential ground disturbance.

DATA REQUEST

33. Please provide an estimate of the right-of-way for the gas line route, and for the potable water line.
34. Please provide a discussion of the width and depth of disturbance associated with both the proposed gas line and the potable water line.

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35. If any additional geotechnical borings are completed for this project within the coming nine months, please have them examined by an archaeologist and provide the findings to the Energy Commission staff.

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Technical Area: Hazardous Materials Management

Author: Geoffrey Lesh

BACKGROUND

Due to change in ownership from Southern California Edison (SCE) to the AES Corporation, the AES Highgrove facility is required to submit an updated San Bernardino County CUPA Business Emergency/Contingency Plan (Business Plan). On June 23, 2006, Kristen Riegel of the San Bernardino Fire Department, Hazardous Materials Division, on behalf of the San Bernardino County Certified Unified Program Agency (CUPA), issued a Notice to Comply to AES. This requirement must be met, as continued updates and maintenance of the Business Plan submitted to the CUPA would be a required condition of certification for the proposed project.

DATA REQUEST

36. Please provide a copy of the updated Business Plan that is submitted to the CUPA.
37. Please provide a copy of the CUPA's response indicating that it is current and satisfies the CUPA's requirements.

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Technical Area: Land Use

Author: David Flores

BACKGROUND

The AFC states that the proposed project site would require a parcel split and a lot line adjustment to separate the tank farm property from the larger parcel owned by the Grand Terrace Redevelopment Agency. Energy Commission staff needs to know when the application would be filed with the City of Grand Terrace.

DATA REQUEST

38. Please provide AES Highgrove's proposed schedule and the status of the application before the City to create two separate legal parcels.
39. Please provide the legal description for the newly created parcel and revised parcel map.

BACKGROUND

A review of Figure 2.2-1 (General Arrangement Map) and the other portions of the project description in the application did not provide enough information to indicate how the proposed structures and project site would comply with local agency regulatory requirements. City of Grand Terrace Zoning Code provisions require that there be building setbacks, adequate street right of way, and street improvements as necessary. Since the diagram (i.e., Figure 2.2-1) does not provide the above referenced regulatory information, it is difficult to ensure compliance with City standards.

DATA REQUEST

40. Revise Figure 2.2-1 General Arrangement Map in the application to provide the:
 - a. location of all existing exterior lot lines with distances to existing and proposed structures;
 - b. location of the centerlines of Adventure Way, and Taylor Street with distances to existing exterior property lines; and
 - c. location of existing and proposed curbs and gutters with distances to exterior property lines.

BACKGROUND

The City of Grand Terrace Sign Ordinance (Title 18) governs the size, location, and type of signs permitted on the project site. The AFC provides no indication of the signs proposed by the applicant. It is not possible to demonstrate compliance with the City Zoning ordinance from existing data submitted.

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DATA REQUEST

41. Provide details on the project's sign program that includes:
- a. the location, size and number of all signs proposed;
 - b. the materials that would be used to construct the signs;
 - c. the lighting technique that would be used for the signs;
 - d. the height of all proposed signs;
 - e. the type of signs to be used (e.g., a monument sign or a building mounted sign);
 - f. if signs would be located on buildings, identify the distance from the surface of the sign to the surface of the structure to which it would be attached;
 - g. architectural renderings or a conceptual drawing of all signs proposed; and
 - h. the content of each proposed sign.

BACKGROUND

The City of Grand Terrace's Zoning Code restricts lot coverage in the M2-Industrial District that includes the project site. The site plan does not provide calculations of the site area and the aerial extent of proposed roofed structures. This data is required to evaluate project compliance with the lot coverage requirements for building in this zone.

DATA REQUEST

42. Provide calculations to show the project's consistency with the City of Grand Terrace's M2-Industrial District building lot coverage standards with respect to the project site (i.e., the entire extent of the ultimate legal parcel proposed for development) in square feet.

BACKGROUND

The proposed natural gas line extension would proceed through several different jurisdictions. At least one of these jurisdictions may require a franchise agreement if the proposed pipeline is proprietary, but not if the gas pipeline is a part of a regulated utility. We need to know what agreements the applicant would need to obtain for each of the involved jurisdictions.

DATA REQUEST

43. Please indicate if the proposed natural gas pipeline extension would be proprietary or not. If franchise agreements are required, please provide the following:

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- a. A schedule for securing the proper franchise agreements.
- b. A copy of franchise agreements and/or acknowledgement letter detailing fees paid.

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Technical Area: Soil and Water Resources

Author: Michael Stephens

BACKGROUND

Potable water demands for the Highgrove Project (HP) are estimated to average 4.0 gallons per minute (gpm), or approximately 2 acre-feet per year (afy). The Riverside Highland Water Company (RHWC), a private non-profit water service company, serves the City of Grand Terrace and owns groundwater wells near to the HP. RHWC's wells include a deep potable water well adjacent to the HP property at Main and Taylor Street, that is planned to be the potable water source for the HP. The sanitary and process water for the Highgrove Generating Station (HGS) was originally supplied from existing wells located on the property.

The HP site is not currently within the service territory of a water purveyor. RHWC has indicated that it will annex the site in order to provide potable water to serve the proposed HP. The applicant states that the annexation will occur before the HP will require water service, but the assumption that this annexation by RHWC will occur prior to the start of HP operations is insufficient for staff to conclude there will be a reliable potable water supply. Additionally, the AFC states that potable water from RHWC may be used as a backup water source during an emergency outage or maintenance for the two on-site plant process source wells. In order to adequately analyze the potable water use and supply reliability staff will need additional information.

DATA REQUEST

44. Please provide a schedule with benchmarks for negotiations between the RHWC and AES Highgrove, LLC, for the water service territory annexation process including effective date of the annexation.
45. Please provide a detailed will-serve letter from RHWC. The will-serve letter should reflect the scheduled date when water service will be supplied to the HP and the amount of water to be available.
46. Please identify a preferred backup potable water supply source sufficient for a worst-case disruption of the primary water supply during operations. Describe potential impacts on other users of the proposed backup source.

BACKGROUND

The AFC states that the HP plant process needs will be served by two of the four wells that are on the property owned by the Riverside Canal Power Company (RCPC), the AES subsidiary that owns the majority of the project site. The AFC Figure 2.2-1 shows wells numbered 1, 2, 3, and 4 in close proximity to each other, with Well 1 approximately 20 feet inside the HP boundary line. Wells 2, 3, and 4 are identified as being outside the property line. At the site visit held September 19, 2006, wells number 3 and number 4, located southeast of the site proposed for the power plant itself, and adjacent to Taylor Street,

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were stated as having approximately 2000 gpm delivery capacity each. On a peak summer day, the instantaneous water consumption for process water needs is expected to be 854 gpm.

Consistent with State law and policy the Energy Commission will approve the use of fresh water for cooling purposes by power plants that it licenses only where alternative water supply sources and alternative cooling technologies are shown to be “environmentally undesirable” or “economically unsound.” Based on an expected operating capacity of 30 percent as stated in the AFC (operating 30 percent of the time on an annual basis), the Highgrove Project (HP) will use an average of 358 afy for all plant processes. Of the 358 afy water used, approximately 209 afy will be used for power plant cooling with the remaining amount used for water injection, turbine inlet air cooling, irrigation and other needs. AES is proposing the use of fresh water from two onsite wells for cooling and other plant processes. However, at least one impaired water source located near the HP is presented in the AFC. The possibility of using groundwater impaired with nitrates from the Spring Street Wells is not discussed with enough detail to determine its potential as a cooling water source, or its accessibility. In addition, although numerous sources of reclaimed water are identified, some within close proximity of the HP, they were all dismissed during the analysis. The Riverside Canal is adjacent to the HP and the Gage Canal is 0.5 miles from the HP. Both canals deliver non-potable irrigation water.

DATA REQUEST

47. Please clarify the location and ownership of the wells numbered 2, 3, and 4 identified in the AFC, Figure 2.2-1, and describe any waterlines, routes, or plans to relocate these wells for the purpose of serving the HP plant process needs.
48. Please provide specific information that includes the contact name, organization, phone number, and the reason for dismissal of the source, for each potential reclaimed water source identified.
49. Please provide analyses of the Riverside and Gage Canals as potential water source(s).

BACKGROUND

The Riverside groundwater basin which underlies the project region is over-drawn, and the application does not provide analyses on the HP's potential impact to the groundwater basin. Aquifer transmissivity, as well as the drawdown affect of water production on the nearby City of Riverside production well #1, has been estimated. It appears that the groundwater impact analysis was based on general groundwater data available for the HP area.

In addition, high nitrate contamination in the aquifer appears to be present in groundwater within the vicinity of the HP. Nitrate in groundwater appears to be a major concern in the area. Increased pumping of groundwater has the potential to mobilize

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nitrate levels, further degrading groundwater supplies. No analysis has been conducted to assess the effect of groundwater pumping related to HP water supply demands on nitrate levels.

DATA REQUEST

50. Please provide aquifer testing data for the groundwater production wells proposed for HP use, as well as the effect that these wells will have on drawdown in nearby wells.
51. Please provide a water balance diagram that explains how the removal of groundwater for the HP will not result in a net groundwater deficit.
52. Please provide an analysis of groundwater pumping impacts on nitrate levels in the aquifer.

BACKGROUND

Wastewater from the cooling process will be stored in Baker tanks on a temporary basis prior to loading on trucks which will transport the water to the Santa Ana Regional Interceptor (SARI) line. Baker Tanks is a company that rents temporary liquid storage tanks of various sizes and configurations, depending on the volume and type of liquid(s) stored.

DATA REQUEST

53. Please provide the number, volume, and type of storage tank(s) that will be used to store wastewater at HP, as well as any secondary containment that will be required.
54. Please provide the length of time that the wastewater will be stored as well as the proposed location of the tank(s).
55. If permits would be required for storage of the wastewater, please provide the specific permit required as well as the associated agency contact information.

BACKGROUND

The SARI line is a regional brine interceptor that was constructed to protect water quality in the Santa Ana River. The SARI line conveys industrial brine and low quality/high total dissolved solids (TDS) wastewater from the Inland Empire (includes large portions of interior San Bernardino and Riverside Counties) to the Orange County Sanitation District's (OCSD) Plant No. 2, where it is treated and discharged to the ocean. The SARI line is designed to convey up to 30 million gallons per day (mgd) to OCSD and currently conveys flows of 9.7 mgd northeast of the Orange County border. For the proposed HP, wastewater would be transported by truck to the nearest truck-transfer station for discharge to the SARI line, which is located at the San Bernardino Municipal Water Reclamation Plant. The proposed route is approximately 5.5 miles northeast of the HP. Ministerial permits for disposal at the Reclamation Plant of truck loads and payment of disposal fees would be coordinated through the City of San

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Bernardino Municipal Water Department, which operates that facility, and the Western Municipal Water District, which permits actual discharge to the SARI line.

The proposed amount of wastewater that will be hauled to the Reclamation Plant's truck-transfer station, and disposed of to the SARI, is 42 afy or 13,685,742 gallons per year. This is a substantial amount of water to store, load, transport and dispose of at an off-site facility. At maximum anticipated plant discharge, over 148,000 gallons of wastewater could be generated in a 24 hour period. Based on an 8,000 gallon capacity per tanker transport, and not accounting for on-site storage, approximately 11 to 19 truck transport trips may be required on a daily basis. Given the relatively short distance from the HP to the SARI Line/Reclamation Plant truck-transfer station, and pipeline boring technologies that are available, it does not appear that an adequate cost analysis was conducted to evaluate the relative merit(s) of this and other alternative wastewater disposal methods. These methods include Zero Liquid Discharge (ZLD), piping to the truck-transfer station for discharge to the SARI line, and disposal in the wastewater sanitary sewer. There is no mention in the AFC describing disposal of wastewater from the previously operating Highgrove Generating Station.

DATA REQUEST

56. Please provide will-serve letters from the City of San Bernardino Municipal Water Department, and the Western Municipal Water District stating their ability to accept this wastewater from the HP.
57. Please provide details on the methods for disposal of wastewater from the previous facility, the Highgrove Generating Station, that occupied the proposed site.
58. Please provide an analysis of the wastewater disposal alternatives including pipeline to the SARI line, ZLD.
59. Please discuss the effect on wastewater disposal alternatives if hybrid-cooling were used to reduce the quantity of wastewater generated.

BACKGROUND

Table 8.14-10 lists the Western Municipal Water District as the permitting agency in charge of disposal of wastewater for the facility. Based on the plant's location, HP must obtain from the City of San Bernardino Municipal Water Department an Indirect Industrial User Permit, and submit a laboratory analysis of a sample from the proposed discharge and a liquid waste-hauler permit application to discharge waste at the truck disposal station.

DATA REQUEST

60. Please provide a complete list of permitting agencies for transportation and disposal of wastewater associated with the plant process water. Include a discussion of each agency's responsibilities, and their typical permitting schedules.

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BACKGROUND

Sanitary wastewater would be discharged to the City of Colton sewer system (operated by the City of Grand Terrace) by interconnecting to an existing pipeline. The sanitary wastewater flow would average about 2.0 gpm, or 2,880 gpd on a 24-hour basis.

DATA REQUEST

61. Please provide a will-serve letter from the City of Grand Terrace and/or the City of Colton that shows that they are willing to accept the domestic wastewater for disposal to their system, and any limitations placed upon the HP in this regard.

BACKGROUND

The HP will be required to complete a Storm Water Pollution Prevention Plan to comply with the SWRCB General Construction Stormwater NPDES Permit. The Energy Commission also requires a Drainage Erosion and Sediment Control Plan (DESCP) subject to the approval of the Energy Commission's Compliance Project Manager. The DESCP will contain information required in a SWPPP while also incorporating local stormwater standards and ordinances. Some soils at the site may contain toxic contaminants.

DATA REQUEST

62. Please provide a DESCP outlining site management activities to be implemented during site mobilization, excavation, and construction.
63. Please include in your analyses how potential toxic contaminants in stormwater will be managed to insure they are properly controlled and disposed.

BACKGROUND

Development of the site would change the general slope, and drainage would be conveyed to an onsite detention basin. The detention basin will be configured and sized to retain onsite drainage for a 10-year, 48-hour storm; this will be confirmed during the detailed, final design stage of the HP. No analysis is presented to assess if onsite retention is a viable means of stormwater management for this site, or whether the alternative of offsite stormwater flow is appropriate.

DATA REQUEST

64. Please conduct an analysis of proposed onsite retention parameters including dimensions of the proposed detention basin, percolation rate, rainfall intensity and duration for the design.
65. Please provide an analysis of the potential impacts on drainage as it relates to 20 year, 50 year, and 100 year storms.

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BACKGROUND

Stormwater at the HP flows towards a detention basin located at the southern end. Figure 8.14-4 presents a site drawing of the proposed facility drainage. From the drawing, it is uncertain how stormwater from off-site will be prevented from flowing into the facility. In addition, the stormwater holding capacity of the proposed basin may be inadequate to hold a major storm event. In the event that stormwater flowing into the detention basin exceeds the holding capacity of the basin, a mechanism for offsite overflow relief could mitigate potential onsite flooding.

DATA REQUEST

66. Please provide an updated figure depicting how offsite runoff is prevented from entering the site.
67. If it is anticipated that offsite runoff will enter the site, please provide revised analyses that includes offsite runoff.

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Technical Area: Socioeconomics

Author: Joseph Diamond Ph. D.

BACKGROUND

The time value of money should be reflected for all economic estimates. Staff needs to know the year that corresponds to the dollar estimates.

DATA REQUEST

68. Please indicate the year for all economic estimates (e.g., economic impact analysis using The Impact Analysis For Planning (IMPLAN) input-output model).

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Technical Area: Visual Resources

Author: Mark Hamblin

BACKGROUND

The AFC indicates that construction of a new high school (located to the southeast across Taylor Street from the project site) was scheduled to commence during the Summer of 2006. Current information from the California Department of Education indicates that construction is expected to start in January of 2007. Development of the school will add a visually-sensitive and intensive land use in proximity to the project site. During the Application for Certification pre-filing phase, Commission staff assisted in the selection of key observation points (KOPs), but at the time, development of the high school was speculative. During the pre-filing activity staff and the applicant considered a KOP at the potential Taylor Street entrance to the parking area for the future high school.

DATA REQUEST

69. Please provide a representative KOP visual simulation from the proposed school site looking towards the HP to illustrate the potential visual impact from the proposed school entrance.
70. Please provide full-page color photographic reproductions of the existing site and a simulation of the proposed project in the existing setting, including the proposed berm and tree sizes at five years after planting.

BACKGROUND

The AFC's analysis of the Pico Park KOP does not describe the number of people that use this recreational area during its operational hours.

DATA REQUEST

71. Please provide information about the approximate number of people, and various types of recreational users that frequent the Pico Park recreational area annually.
72. Please provide estimates of the potential number of people and types of recreation users that may use the proposed sports facilities to be developed between the existing park and the project site.

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Technical Area: Visible Plume Modeling

Author: Joe Loyer

BACKGROUND

Staff intends to conduct a plume modeling analysis using the Combustion Stack Visible Plume (CSVP) model and the Seasonal Annual Cooling Tower Impact (SACTI) model for the project, as is done for all projects with cooling towers. Staff will provide the applicant with a copy of the CSVP model training manual upon request.

DATA REQUEST

73. Please provide the following meteorological data files:

- a. five years of meteorological data files in either the National Climate Data Center (NCDC) CD144 (surface data), NCDC-TD3280 (hourly surface observations with precipitation), or Hourly United States Weather Observations (HUSWO) format. The files should be the most recent years available. The files must include location, present weather, cloud cover, and visibility data. Please include a complete description of the source of this data (i.e. specific location, anemometer height, etc), and a discussion of why the data is representative of the area. Please also provide an electronic copy of the raw meteorological data file for each year.
- b. Please provide meteorological data files for the same five years requested in part a., above, in Industrial Source Complex (ISCST3) modeling format from the above data source. These files must include stability class data.

74. Please provide the values for heat rejection (MW/hr), exhaust temperature, and exhaust mass flow rate that affect cooling tower vapor plume formation for a range of ambient conditions that represent reasonable worst-case operating scenarios. At a minimum, please fill in all blanks in the table below. Please also update/correct the table, if necessary.

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Parameter	Cooling Tower Exhausts		
Number of Cells	3 towers - 2 cells each		
Cell Height*	6.55 meters		
Cell Diameter*	4.88 meters		
Tower Housing Length (2 cells)*	16.84 meters		
Tower Housing Width (2 cells)*	12.65 meters		
Ambient Temperature	34 °F	72 °F	110 °F
Ambient Relative Humidity	80 %	65 %	50 %
Heat Rejection (MW/hr)			
Exhaust Temperature (°F)			
Exhaust Mass Flow Rate (lb/hr)			

*Stack dimensions from AFC.

BACKGROUND

Staff intends to model the visible plumes from the cooling tower using hourly estimated exhaust conditions based on the hourly ambient conditions of the meteorological file. Staff will assume saturated cooling tower exhaust at the exhaust temperature determined through interpolation for the hourly ambient conditions. Therefore, additional combinations of temperature and relative humidity, if provided by the applicant, will more accurately represent the cooling tower exhaust conditions.

DATA REQUEST

75. Please indicate if the cooling tower has any plume mitigation features that would reduce the exhaust moisture content below the saturated level.
76. Please provide the cooling tower make and model number, and any vendor documentation available for the specific model.
77. Please provide a fogging frequency curve from the cooling tower vendor, if available.
78. Please indicate how many cooling tower cells will be turned on under different potential partial load conditions. Please also note if ambient conditions, such as cold temperatures, dictate when cells may be turned off.
79. Please confirm that the cooling tower fan motors will not have a variable speed/flow controller.

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Technical Area: Waste Management

Author: Ellie Townsend-Hough

BACKGROUND

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) is working with the Southern California Edison Company (SCE) on the investigation and remediation of the toxic contaminants that may remain in the soil of the detention basins at the former SCE Highgrove Generating Station. Energy Commission staff discussed the HP and the site's remediation status with Jose Kou, P.E., Chief, Southern California Permitting and Corrective Action Branch of the Department of Toxic Substances Control (DTSC). Currently SCE is working under a Stipulation Order to remediate the site. DTSC has been approached by the AES Company to oversee the corrective action at the parcels of the facility where the existing power plant is located and the location of the future power plant. DTSC has started drafting a corrective action consent agreement that will be negotiated with AES for the oversight activities on the HP site.

Also, a Closure Demonstration Report certifying clean closure of several hazardous waste management areas at the former Highgrove Generating Station is being prepared by SCE, for submittal to DTSC.

DATA REQUEST

Please provide a proposed schedule for the completion of the DTSC Corrective Action.

80. Please specify if demolition of the entire existing Highgrove Generating facility can take place while a Corrective Action is still in progress.
81. Please provide a schedule indicating when (a) the Closure Demonstration Report will be complete, (b) the expected date of DTSC's determination of the closure certification, and (c) completion of the project site's remediation activity.

BACKGROUND

Staff needs additional information to assess potential impacts from soil excavation during construction of the proposed HP. Several documents are listed in the AFC Waste section but are not provided (Phase II Environmental Site Assessment (ESA) June 1997 and March 1998). There are a number of statements indicating that no further clean-up is required on various areas of the plant site (west basin and east basin), but there is no documentation from DTSC to confirm those findings.

DATA REQUESTS

82. Please provide copies of the Highgrove Generating Station Phase II ESA (June 1997) and Phase II ESA for the Highgrove Generating Station detention basins (March 1998).

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83. Please provide a letter from DTSC stating that no further investigations are required for the floor drain detention basin (west basin) and boiler wastewater pond (east basin).

BACKGROUND

Section 8.13.3.1 of the AFC states that there are high concentration levels of arsenic in the area of the existing facility's pipelines and the tank farm property. The AFC indicates that the significance of the arsenic concentration reported may need further evaluation for comparing the levels to background concentrations in local soils.

DATA REQUESTS

84. Please describe and provide any documentation regarding the discussions, investigations and/or remediation activities the applicant has entered into, or agreed to, with DTSC concerning the high levels of arsenic found at various areas of the generating station.
85. If cleanup of areas with high concentration of arsenic is required, please discuss how long the required remediation would take and address whether the remediation would be completed prior to start of HP construction.

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE
STATE OF CALIFORNIA**

**APPLICATION FOR CERTIFICATION
FOR THE AES HIGHGROVE
POWER PLANT PROJECT**

**Docket No. 06-AFC-2
PROOF OF SERVICE**
(Established 8/2/06)

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 04-AFC-01
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

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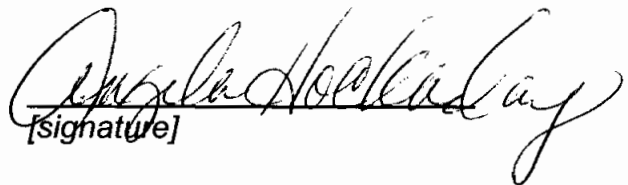
DECLARATION OF SERVICE

I, Angela Hockaday, declare that on October 6, 2006, I deposited copies of the attached Data Requests, in the United States mail at Sacramento, CA with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.


[signature]